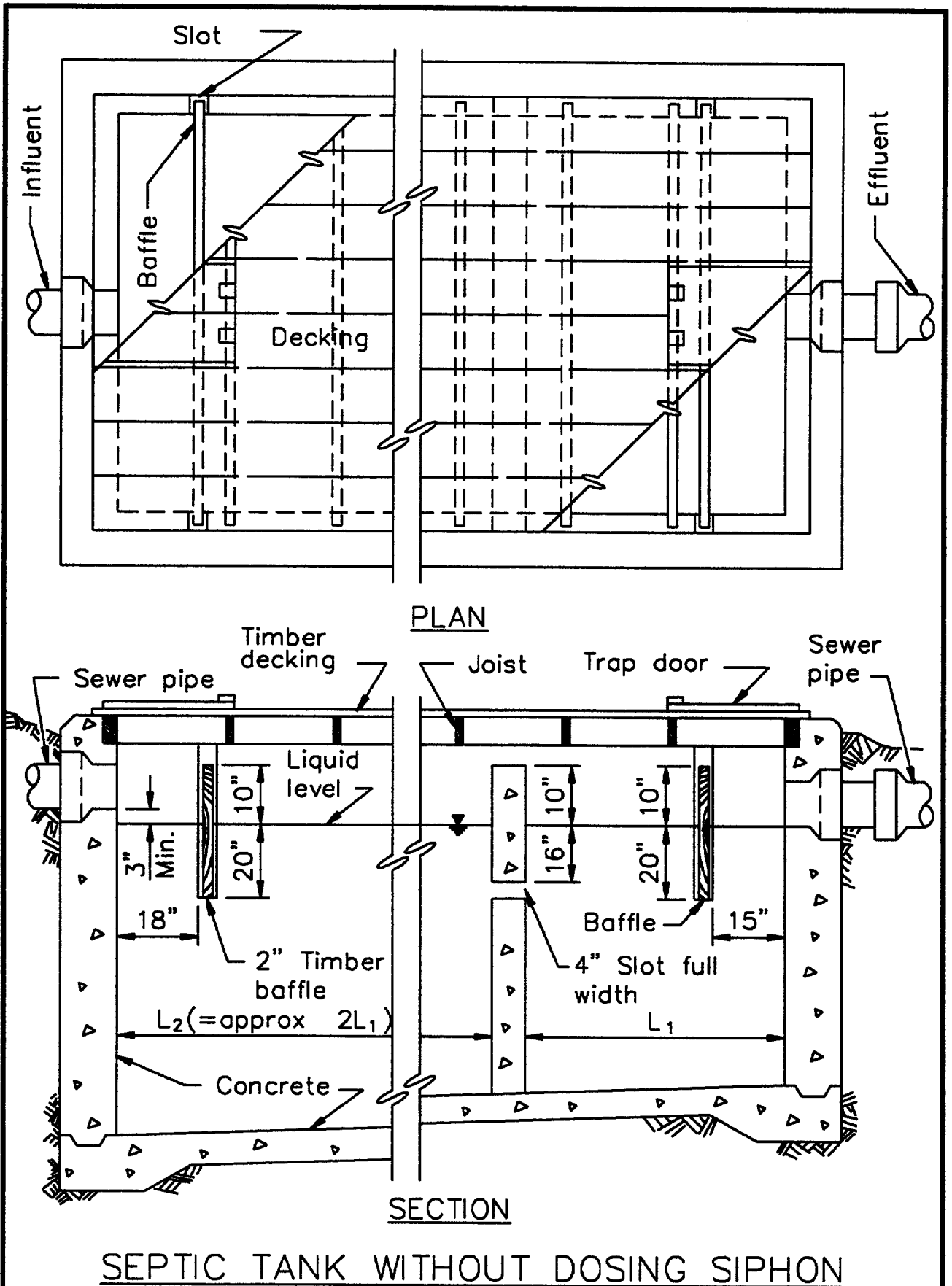
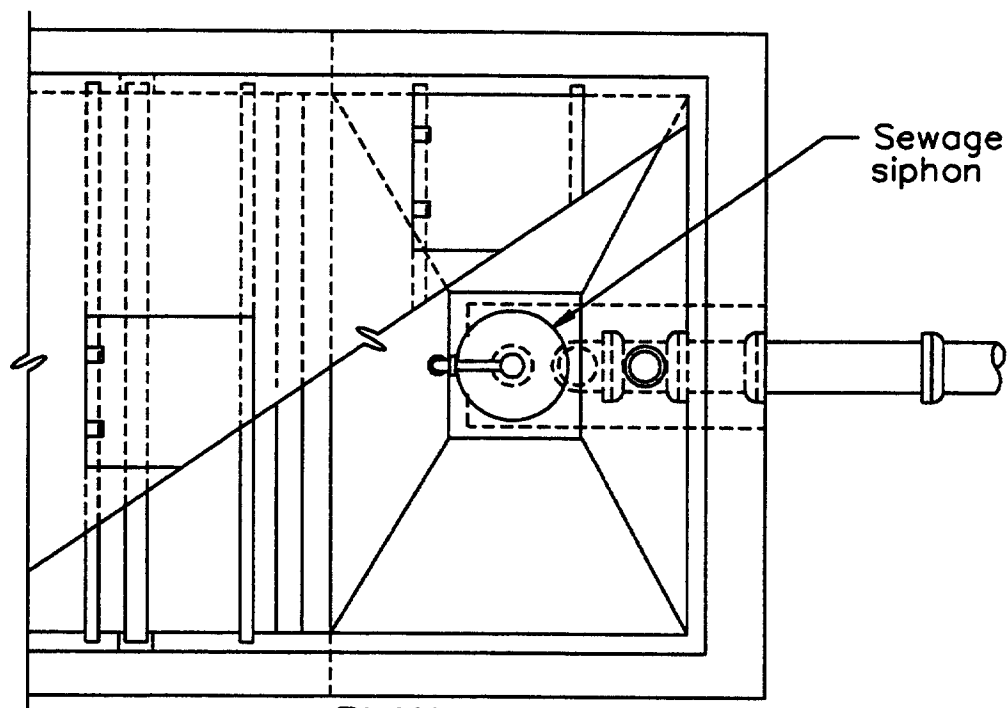


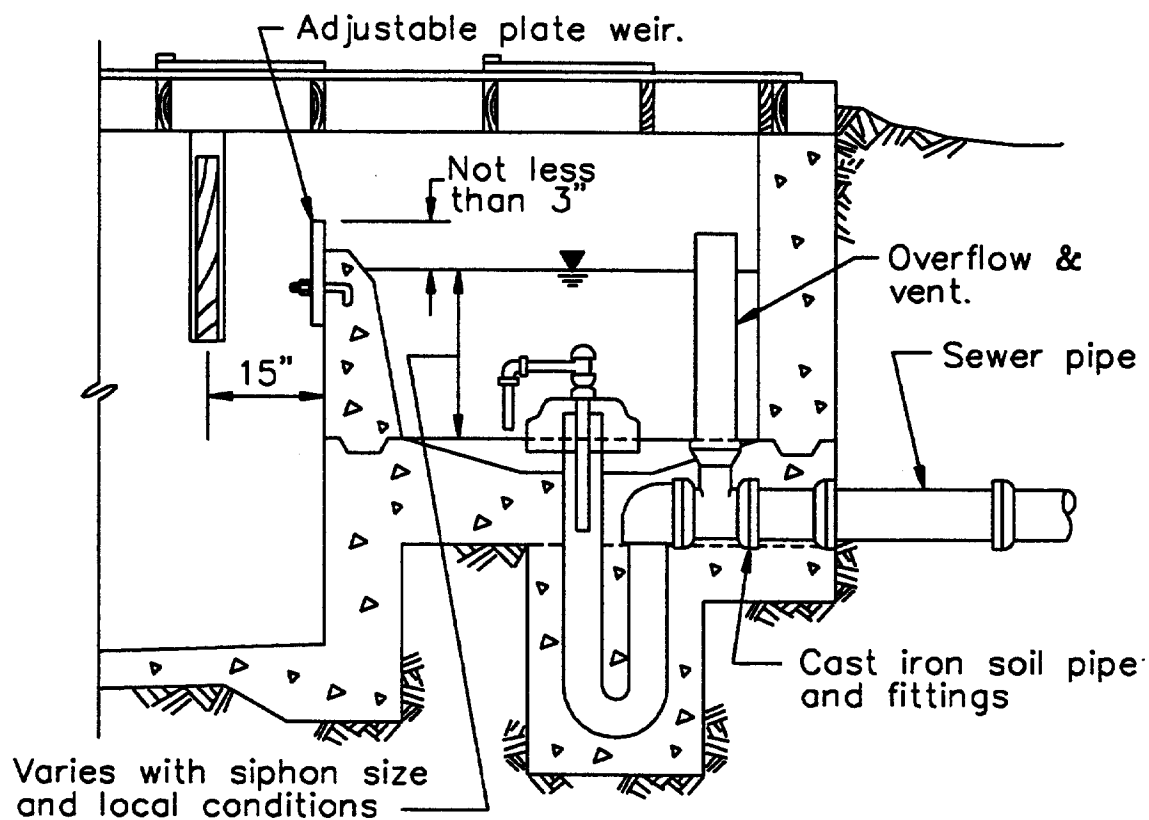
NOTE: ALL LETTERING SHALL BE 1/8" MINIMUM HEIGHT.



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PLAN

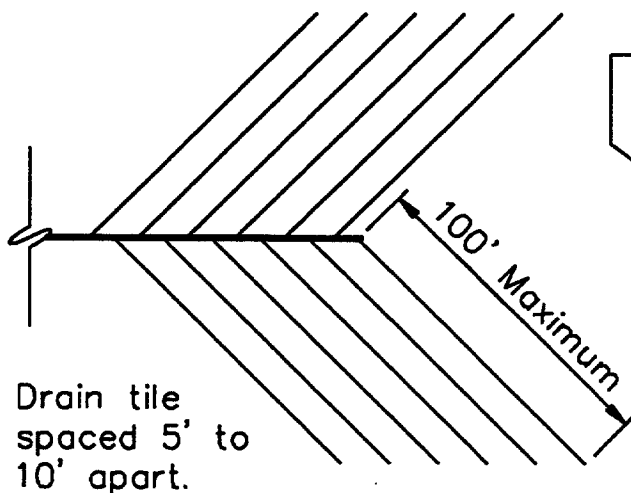


SECTION

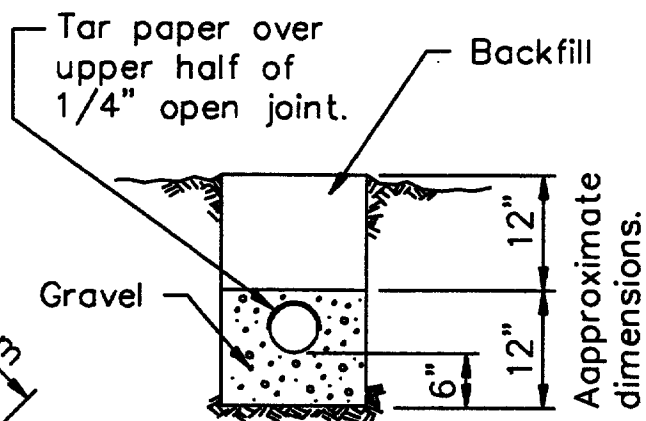
SEPTIC TANK WITH DOSING SIPHON

NOTE: ALL LETTERING SHALL BE 1/8" MINIMUM HEIGHT.

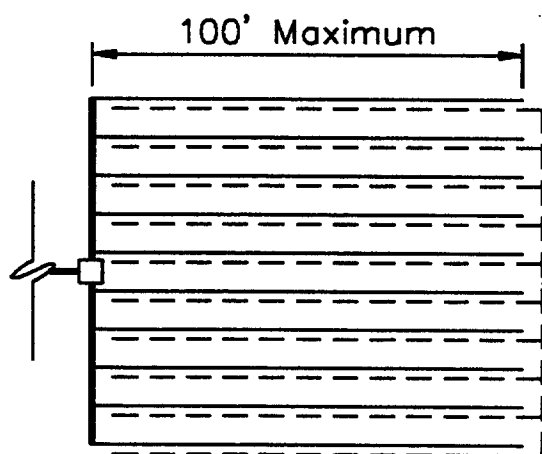
Lay tile on 0.5% Min. grade when dosing siphon is omitted and on 0.3% Min. when used.



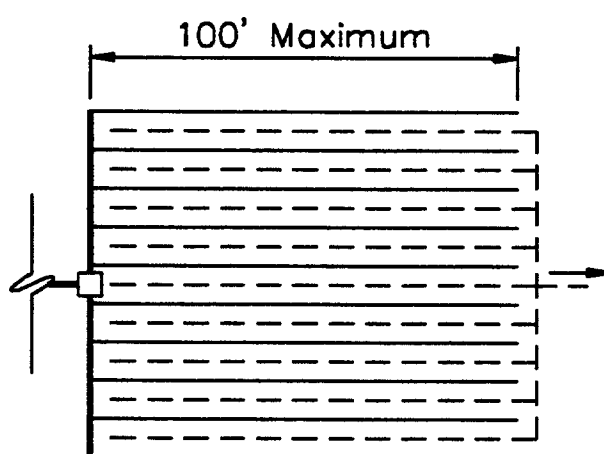
PLAN



PLAN



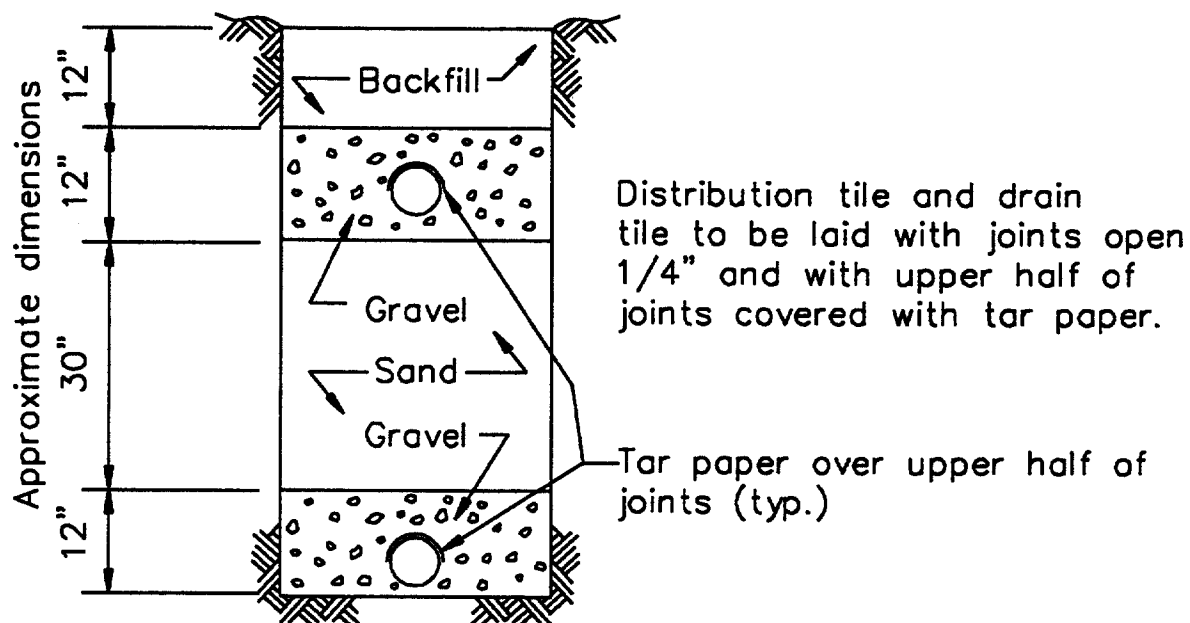
PLAN
TRENCH TYPE



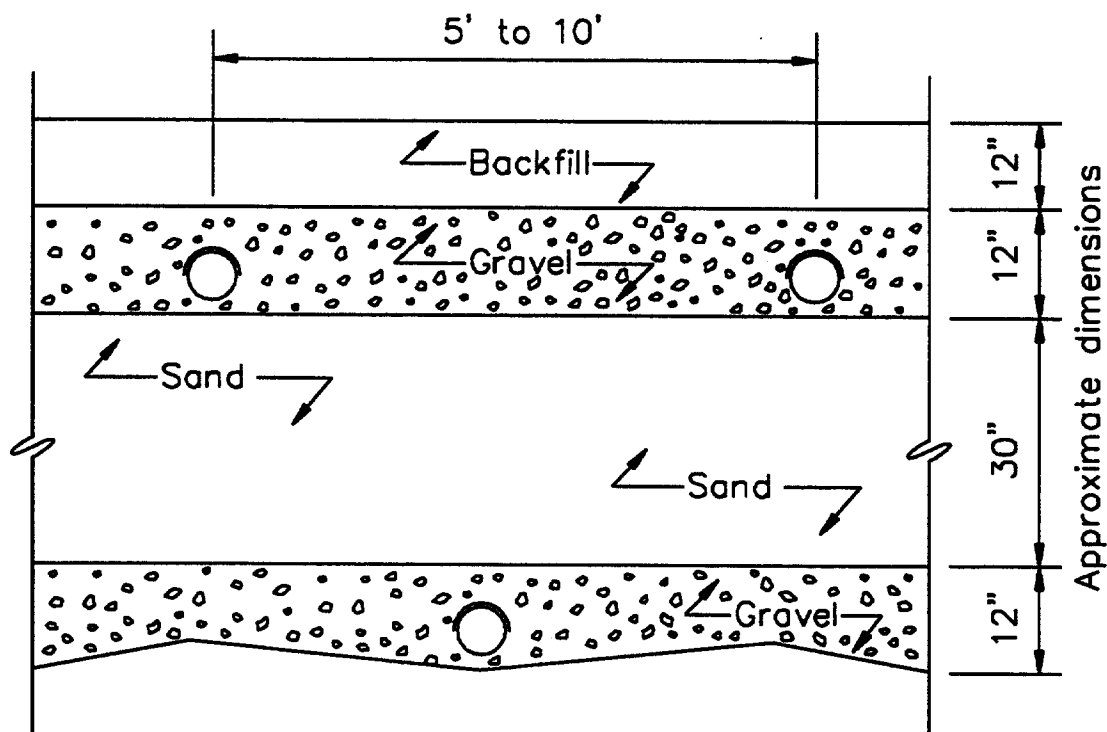
PLAN
BED TYPE

SUBSURFACE SAND FILTER NOT TO SCALE

NOTE: ALL LETTERING SHALL BE 1/8" MINIMUM HEIGHT.



SECTION TRENCH TYPE



SECTION BED TYPE

SUBSURFACE SAND FILTER

NOTES

1. For use as a design guide.
2. For septic tanks of capacities ranging from 500 gallons to 2000 gallons.
3. Design of septic Tanks: Tank capacity should provide approximately a 24-hour detention period at average rate of flow if tile fields are used and an 18-hour detention period if subsurface sand filters are used. Add 15% to 25% to volume for sludge space, using the larger percentage for the smaller tanks. Length should not be less than two nor more than three times the width. Provide depth of at least 4 feet in the smaller tanks and 4 1/2 to 6 feet in the larger tanks. Tanks of less than 500-gallon capacity should not be used. In general, septic tanks are not recommended for populations exceeding 500.
4. The tank top, when at or above grade, may be timber construction or concrete, either fixed or as removable slabs. If below grade, the top should be a fixed concrete slab and access manholes should be provided instead of the trap doors and extended to the ground surface.
5. Baffles may be concrete instead of timber. In small tanks pipe fittings may be used instead of baffles.
6. Dosing Tanks: In general, dosing tanks should be provided for septic tanks serving populations exceeding 20 if the effluent is discharged into tile fields or subsurface sand filters. Dosing tank discharge capacity should equal approximately 80 percent of the volumetric capacity of the drain tile. Where this would result in an excessively large dosing tank two alternating siphons may be used, each discharging to one-half of the filter or tile field. Dosing tanks are not required when effluent is discharged into leaching wells.
7. Subsurface Sand Filters: Provide one square foot of filter area per gallon of sewage per day. Provide for rodding and flushing distribution lines. Provide vents on sub-drains and distribution lines.

8. **Soil Absorptivity Test:** To determine the absorption capacity of the ground for sewage disposal, dig test holes one foot square to proposed depth of tile trench or to various depths below the water surface of leaching wells. Fill each hole with water to a depth of one foot. After this has seeped away and while the soil is still wet, refill with water to a depth of 6 inches and note average time for surface to drop one inch. Compute the required trench bottom area for tile field or bottom and side area for leaching wells from the following table:

Time in Minutes for Water Level to Drop One Inch	Absorption in Gallons per Day	
	Per Sq. Ft. of Trench Bottom in Tile Fields	Per Sq. Ft. of Percolation Area in Leaching Wells
1	4.0	5.3
2	3.2	4.3
5	2.4	3.2
10	1.7	2.3
30	0.8	1.1
60	0.6	0.8

9. **Tile Fields:** The proposed site of a tile field should be investigated to determine whether seasonal ground water level would obstruct disposal. The subsurface should be explored to determine whether an impervious stratum exists so close to the tile as to prevent continued percolation and cause eventual saturation of the soil. The site should not be in an area that would be subjected to the movement of equipment or where planning for site development requires pavement or deep filling in the future. Posts or other markers should define the tile field boundaries. To promote aeration and evaporation the cover over a tile field should be of as loose soil as economically available and as shallow as feasible. A depth of 15 to 18 inches is usually sufficient to prevent freezing and the entrance of roots of grass or weeds into the tile. Specifications for materials and methods of construction should be such that the full intent of the design will be reflected in the completed facility. Overloading during periods of construction should not be permitted as this could result in clogging the tile field and necessitate costly repairs.